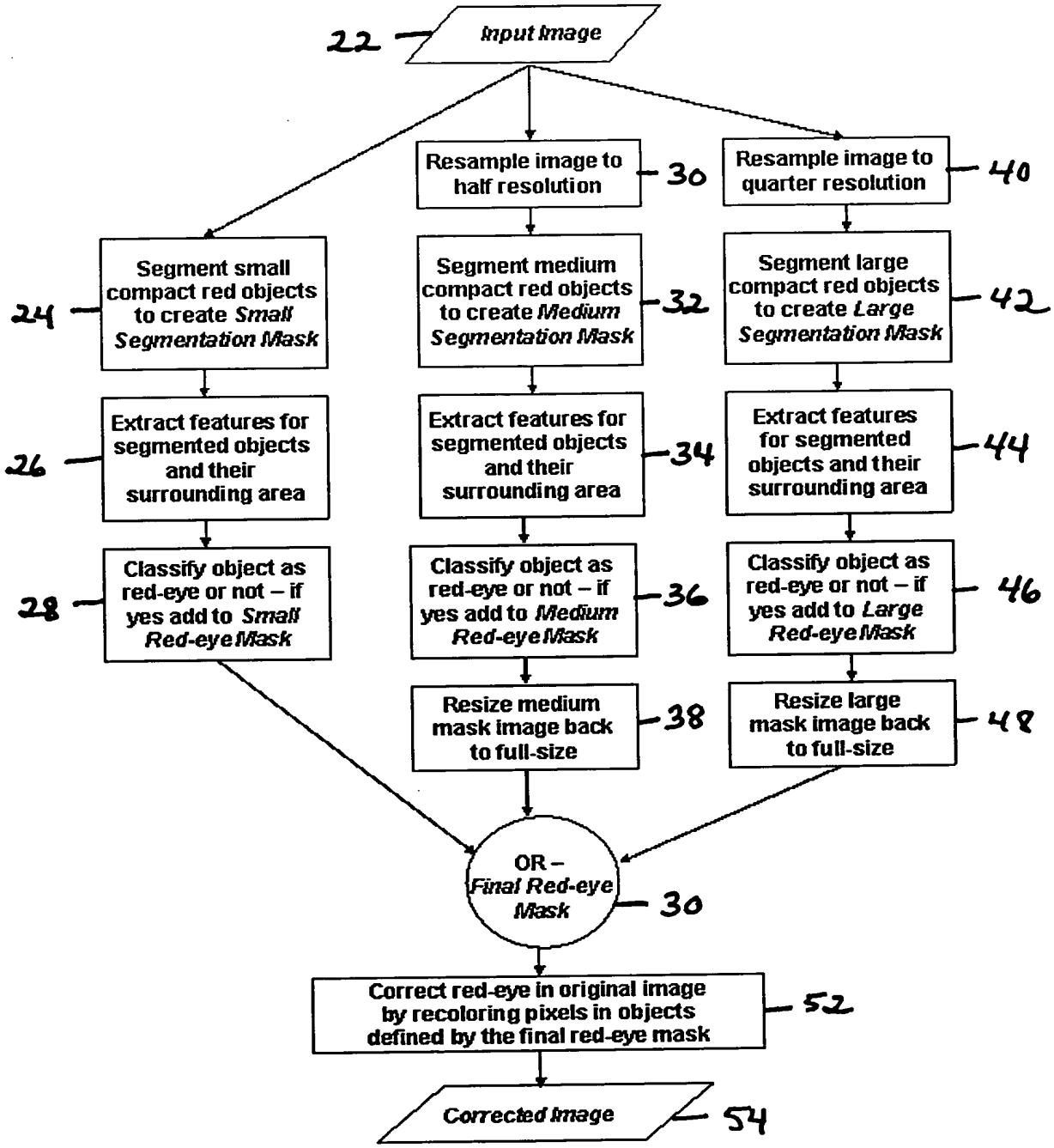
22
Input Image
Resample image to half resolution
30
Resample image to quarter resolution
40
Segment small compact red objects to create Small Segmentation Mask
24
Segment medium compact red objects to create Medium Segmentation Mask
32
Segment large compact red objects to create Large Segmentation Mask
42
Extract features for segmented objects and their surrounding area
26
Extract features for segmented objects and their surrounding area
34
Extract features for segmented objects and their surrounding area
44
Classify object as red-eye or not – if yes add to Small Red-eye Mask
28
Classify object as red-eye or not – if yes add to Medium Red-eye Mask
36
Classify object as red-eye or not – if yes add to Large Red-eye Mask
46
Resize medium mask image back to full-size
38
Resize large mask image back to full-size
48
OR – Final Red-eye Mask
30
Correct red-eye in original image by recoloring pixels in objects defined by the final red-eye mask
52
Corrected Image
54

FIG. 1

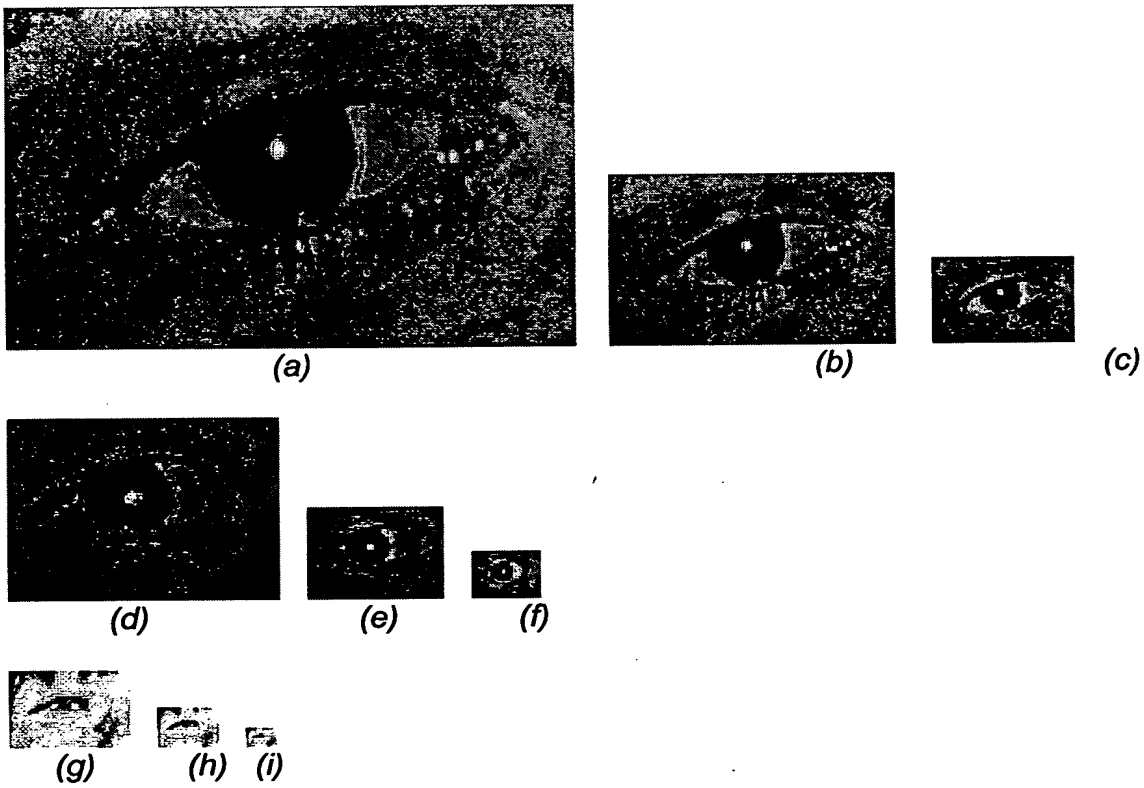

FIG. 2

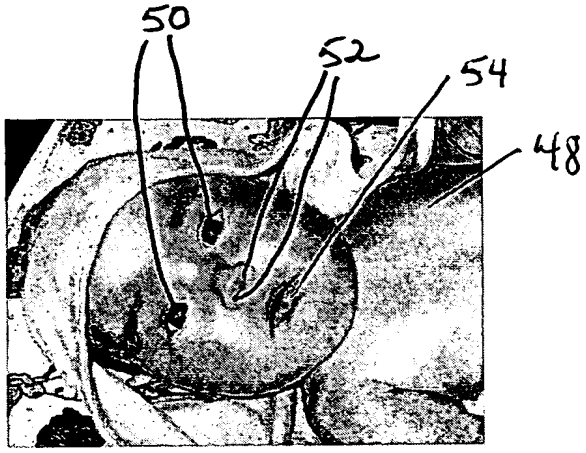

FIG. 3a

FIG. 3b

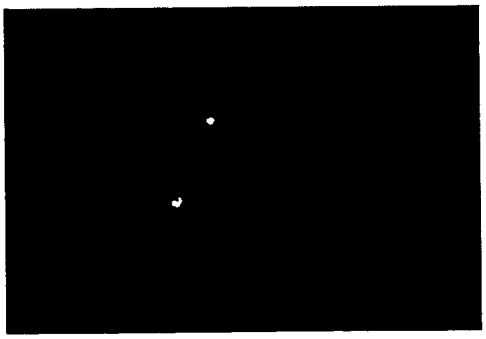

FIG. 3c

Red Eye Detection & Removal - D:\BoyPlaying.tif
File View Help
Open File
Auto
Paint
Undo Last
Zoom In
Zoom Out
114
112
110
Ready

FIG. 4

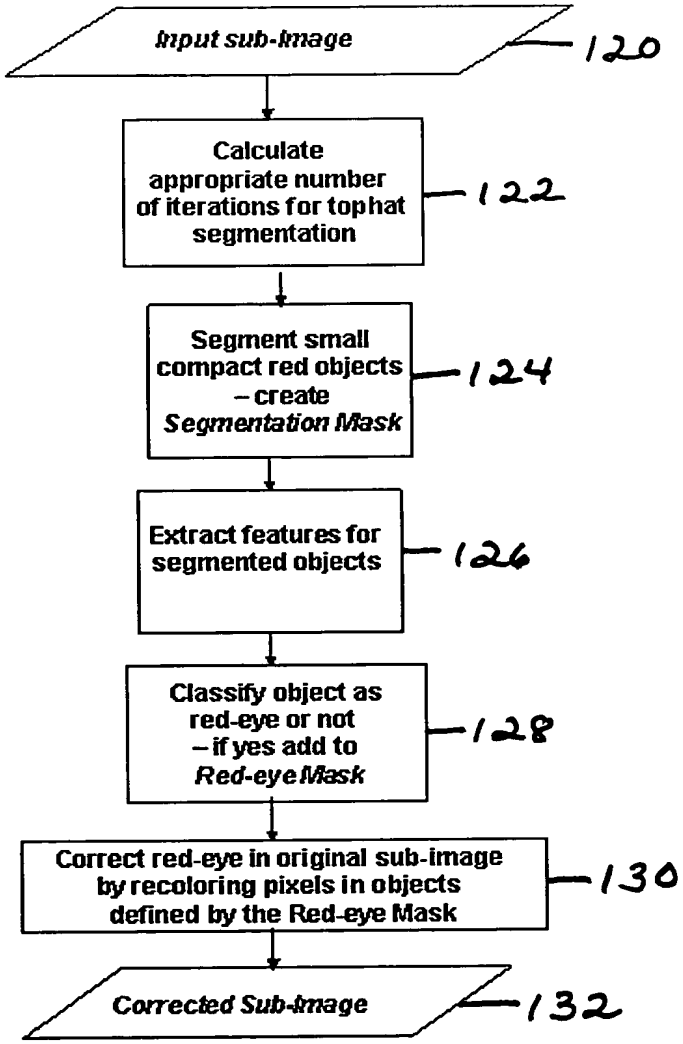
Input sub-image
120
Calculate appropriate number of iterations for tophat segmentation
122
Segment small compact red objects – create Segmentation Mask
124
Extract features for segmented objects
126
Classify object as red-eye or not – if yes add to Red-eye Mask
128
Correct red-eye in original sub-image by recoloring pixels in objects defined by the Red-eye Mask
130
Corrected Sub-image
132

FIG. 5

FIG. 6a

FIG. 6b

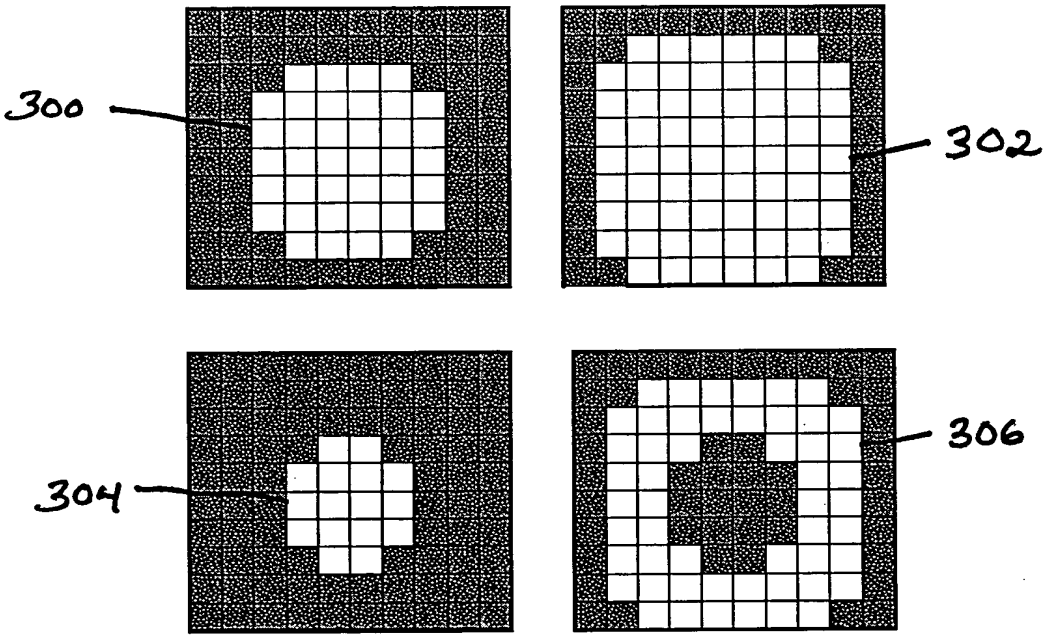

FIG. 6c

FIG. 6d

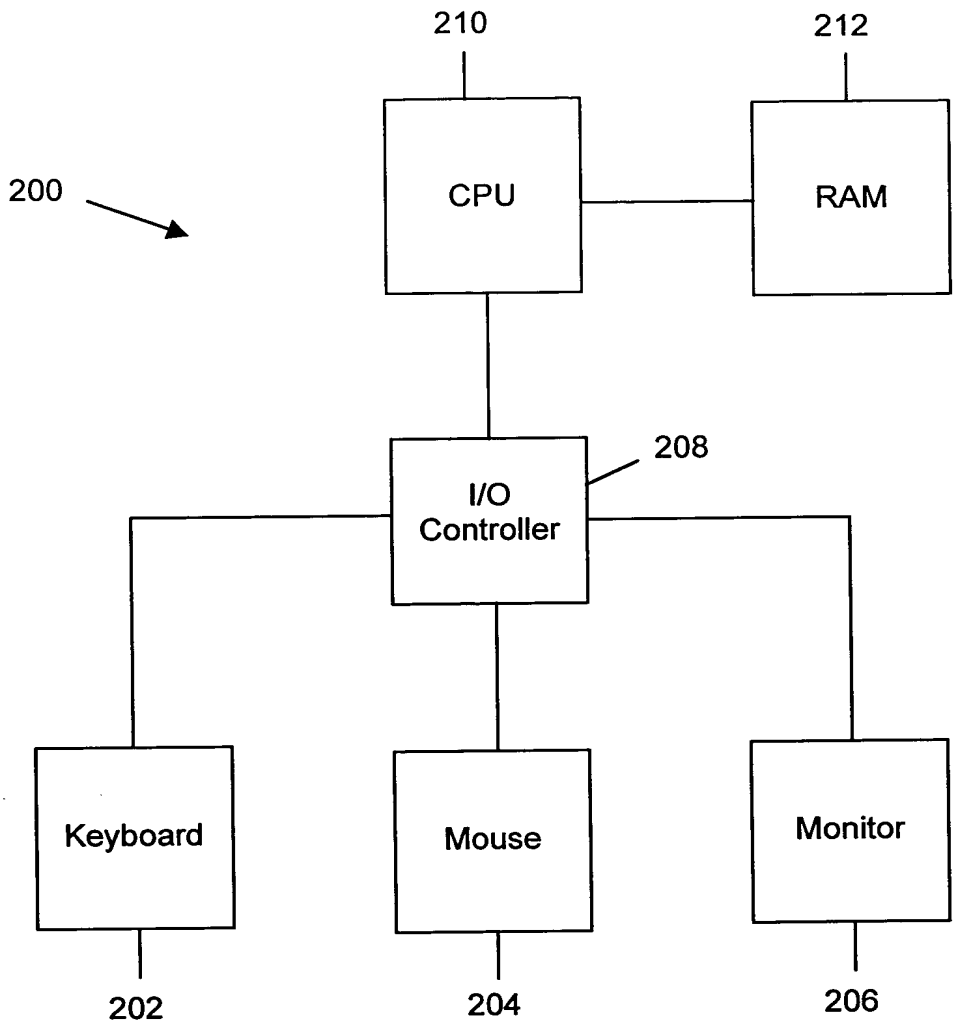
210
212
200
CPU
RAM
208
I/O
Controller
Keyboard
Mouse
Monitor
202
204
206

FIG. 7